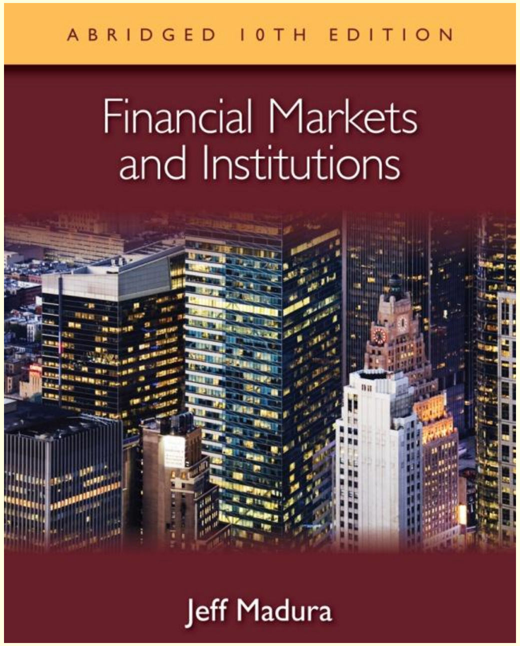
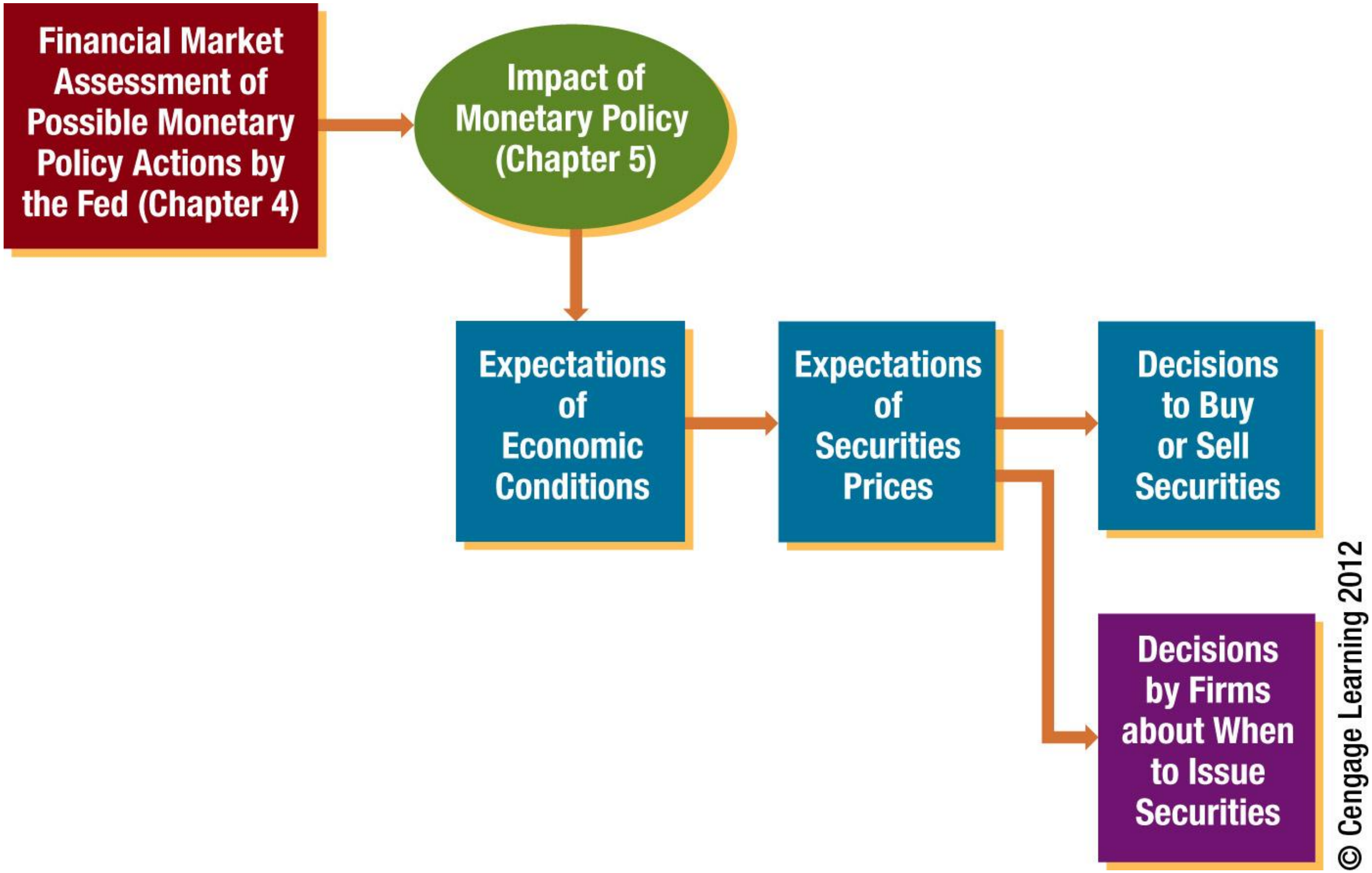
Financial Markets and Institutions

Abridged 10th Edition

by Jeff Madura



Part 2 The Fed and Monetary Policy



4 Functions of the Fed

Chapter Objectives

- describe the organizational structure of the Fed,
- describe how the Fed influences monetary policy,
- explain how the Fed revised its lending role in response to the credit crisis,
- explain how monetary policy is used in other countries.

Overview

As the central bank of the United States, the Fed conducts national monetary policy in an attempt to achieve full employment and price stability (low or zero inflation) in the United States.

1. Since the Fed's monetary policy affects interest rates, it has a strong influence on the cost of borrowing by households.
2. Monetary policy also affects the cost of borrowing by businesses and thereby influences how much money businesses are willing to borrow to support or expand their operations.

Organizational Structure of the Fed

Five Major Components of the Fed:

1. Federal Reserve district banks (Exhibit 4.1)

a. 12 Federal Reserve district banks. New York Fed is considered the most important.

b. Commercial banks purchase stock in their Federal Reserve district bank to become members. The stock pays a maximum dividend of 6% annually.

c. Each Fed district bank has 9 directors.

d. Facilitate operations within the banking system by clearing checks, replacing old currency, and providing loans (through the discount window) to depository institutions in need of funds.

Five Major Components of the Fed:

2. Member Banks

a. Commercial banks can elect to become member banks if they meet specific requirements of the Board of Governors

b. All national banks are required to be members of the Fed.

Organizational Structure of the Fed (Cont.)

Five Major Components (Cont.):

3. Board of Governors

a. The Federal Reserve Board is made up of seven members

b. Each member is appointed by the President of the U.S. and serves a nonrenewable 14-year term.

c. One of the seven board members is selected by the President to be the **Federal Reserve Chairman** for a 4-year renewable term.

d. One of the seven board members is designated by the President to be the **Vice Chairman for Supervision** according to the Financial Reform Act of 2010.

Organizational Structure of the Fed (Cont.)

Five Major Components (Cont.):

4. Federal Open Market Committee (FOMC)

Made up of the seven members of the Board of Governors plus the presidents of five Fed district banks (the New York district bank plus 4 of the other 11 Fed district banks as determined on a rotating basis).

Organizational Structure of the Fed (Cont.)

Five Major Components (Cont.):

5. Advisory Committees

a. **Federal Advisory Council** consists of one member from each Federal Reserve district who represents the banking industry. Meets with the Board of Governors in Washington, D.C., at least four times a year and makes recommendations about economic and banking issues.

b. **Consumer Advisory Council** consists of 30 members who represent the financial institutions industry and its consumers.

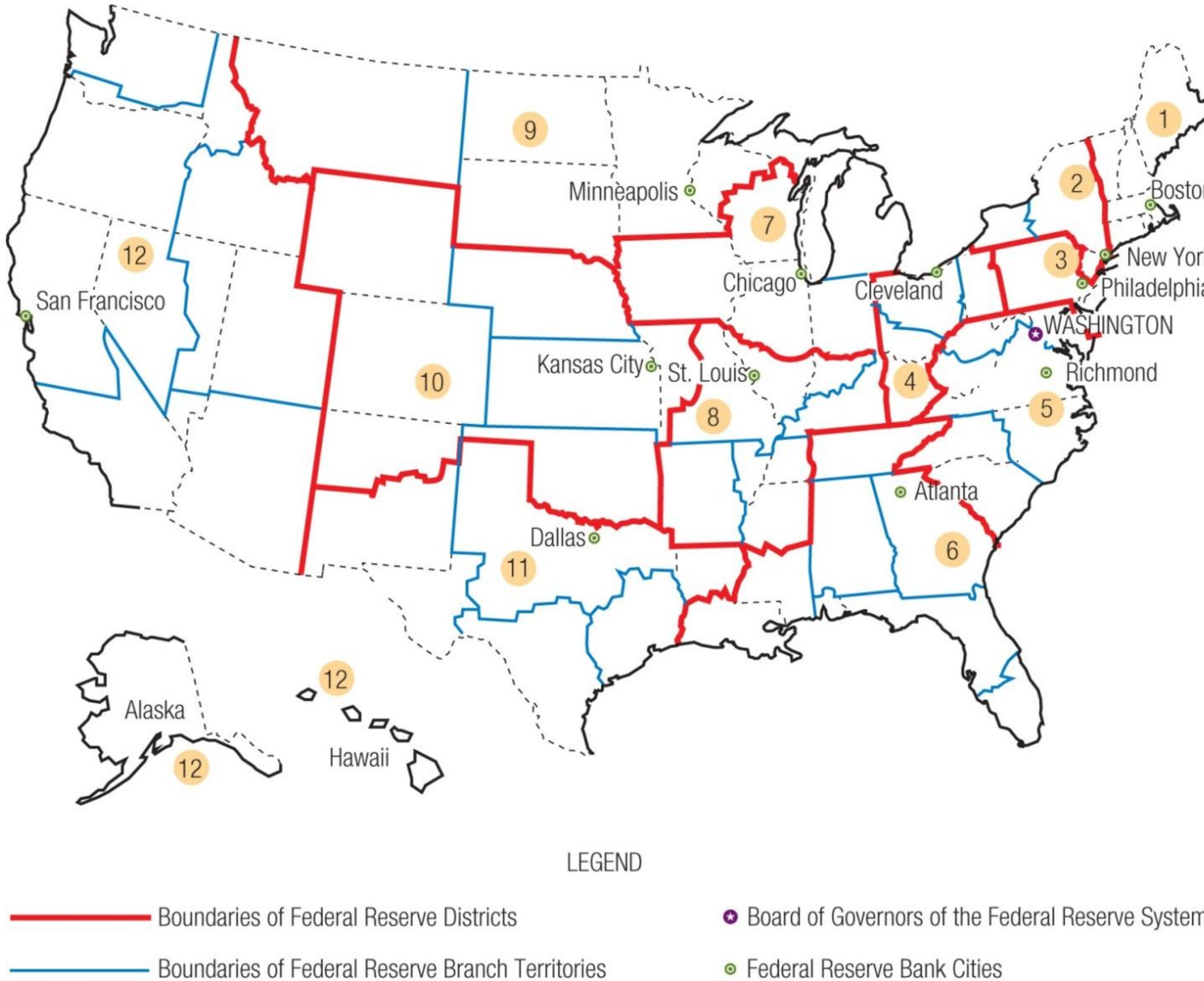
c. **Thrift Institutions Advisory Council** consists of 12 members who represent savings banks, S&Ls, and credit unions.

Organizational Structure of the Fed (Cont.)

Consumer Financial Protection Bureau

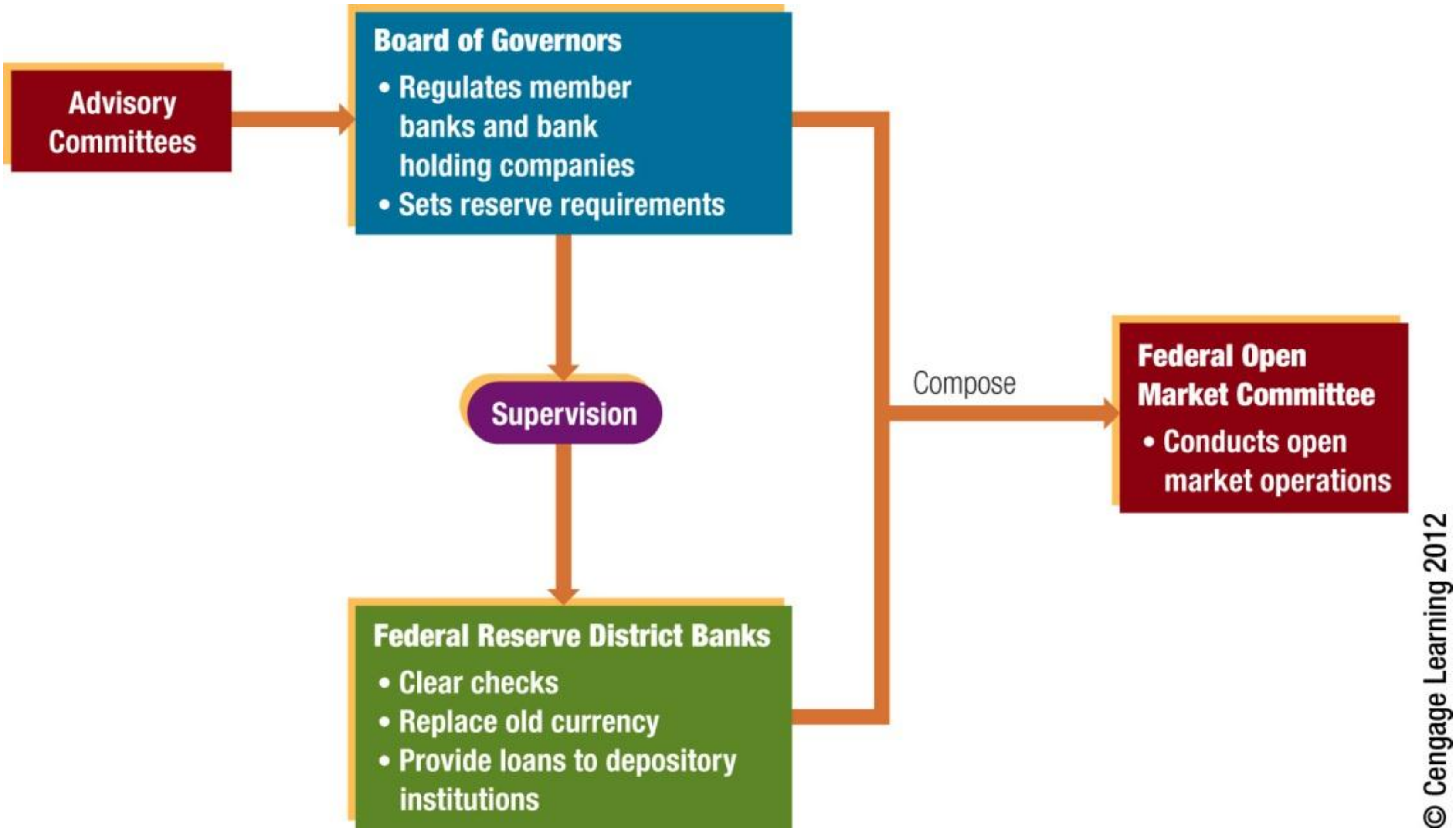
- Established as a result of the Financial Reform Act of 2010.
- Responsible for regulating financial products and services, including online banking, certificates of deposit, and mortgages.

Exhibit 4.1 Locations of Federal Reserve District Banks



Source: Federal Reserve Bulletin.

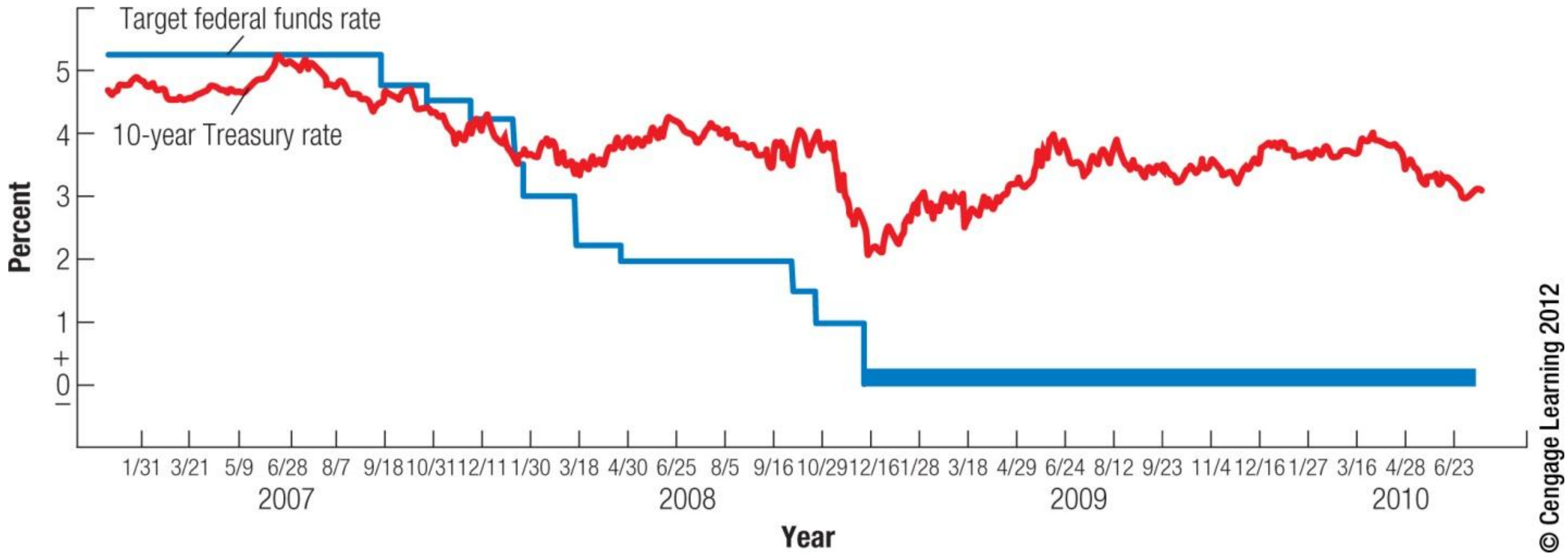
Exhibit 4.2 Integration of Federal Reserve Components



How the Fed Controls the Money Supply:

1. **Open Market Operations** - The FOMC meets eight times a year, sets targets for the money supply growth level and the interest rate level, and implements monetary policy.
   a. **Pre-meeting economic report** (Beige book) - a consolidated report of regional economic conditions in each district.
   b. **Economic presentations** - Presentations include data and trends for wages, consumer prices, unemployment, GDP, business inventories, foreign exchange rates, interest rates, and financial market conditions.
   c. **FOMC decisions** - each member can offer recommendations regarding the federal funds rate target.
   d. **FOMC Statement** - a statement that summarizes their conclusion.
   e. **Minutes of FOMC Meeting** - provided to the public and are also accessible on Federal Reserve websites.

Exhibit 4.3 Targeted Federal Funds Rate over Time



Source: *Federal Reserve.*

How the Fed Controls the Money Supply:

2. Role of the Fed's Trading Desk

If a change in monetary policy is appropriate, the FOMC decision is forwarded to the **Trading Desk** (Open Market Desk) at the NY Fed through a **policy directive**.

a. **Fed purchase of securities** – To lower the federal funds rate, traders purchase Treasury securities from securities dealers. The dealers' bank account balances increase causing an increase in the supply of funds.

b. **Fed sale of securities** – To increase the federal funds rate, traders sell government securities to government securities dealers. As the dealers pay for the securities, their bank balances decrease leading to a decrease in the supply of funds.

c. **Fed trading of repurchase agreements** - Purchases Treasury securities from government securities dealers with an agreement to sell back the securities at a specified date in the near future

How the Fed Controls the Money Supply

2. Role of the Fed's Trading Desk (Cont.)

d. Control of M1 versus M2

- The optimal form of money should (1) be controllable by the Fed and (2) have a predictable impact on economic variables when adjusted by the Fed.
- **M1** includes currency held by the public and checking deposits (such as demand deposits, NOW accounts, and automatic transfer balances) at depository institutions.
- **M2** includes everything in M1 as well as savings accounts and small time deposits, MMDAs, and some other items.
- **M3** includes everything in M2 in addition to large time deposits and other items.

Exhibit 4.4 Comparison of Money Supply Measures

MONEY SUPPLY MEASURES
M1 = currency + checking deposits
M2 = M1 + savings deposits, MMDAs, overnight repurchase agreements, Eurodollars, noninstitutional money market mutual funds, and small time deposits
M3 = M2 + institutional money market mutual funds, large time deposits, and repurchase agreements and Eurodollars lasting more than one day

How the Fed Controls the Money Supply:

2. Role of the Fed's Trading Desk (Cont.)

e. Consideration of technical factors – Technical factors include currency in circulation and Federal Reserve float . The manager of the Trading Desk incorporates the expected impact of technical factors on funds into the instructions to traders.

f. Dynamic versus defensive Open Market Operations

- Dynamic operations are implemented to increase or decrease the level of funds
- Defensive operations offset the impact of other conditions that affect the level of funds.

How Fed Operations Affect All Interest Rates

- Even though most interest rates are market determined, the Fed can have a strong influence on these rates by controlling the supply of loanable funds.
- Open Market Operations in Response to the Economy

a. **2001–2003:** The Fed frequently used open market operations to reduce interest rates during this period of weak economic conditions.

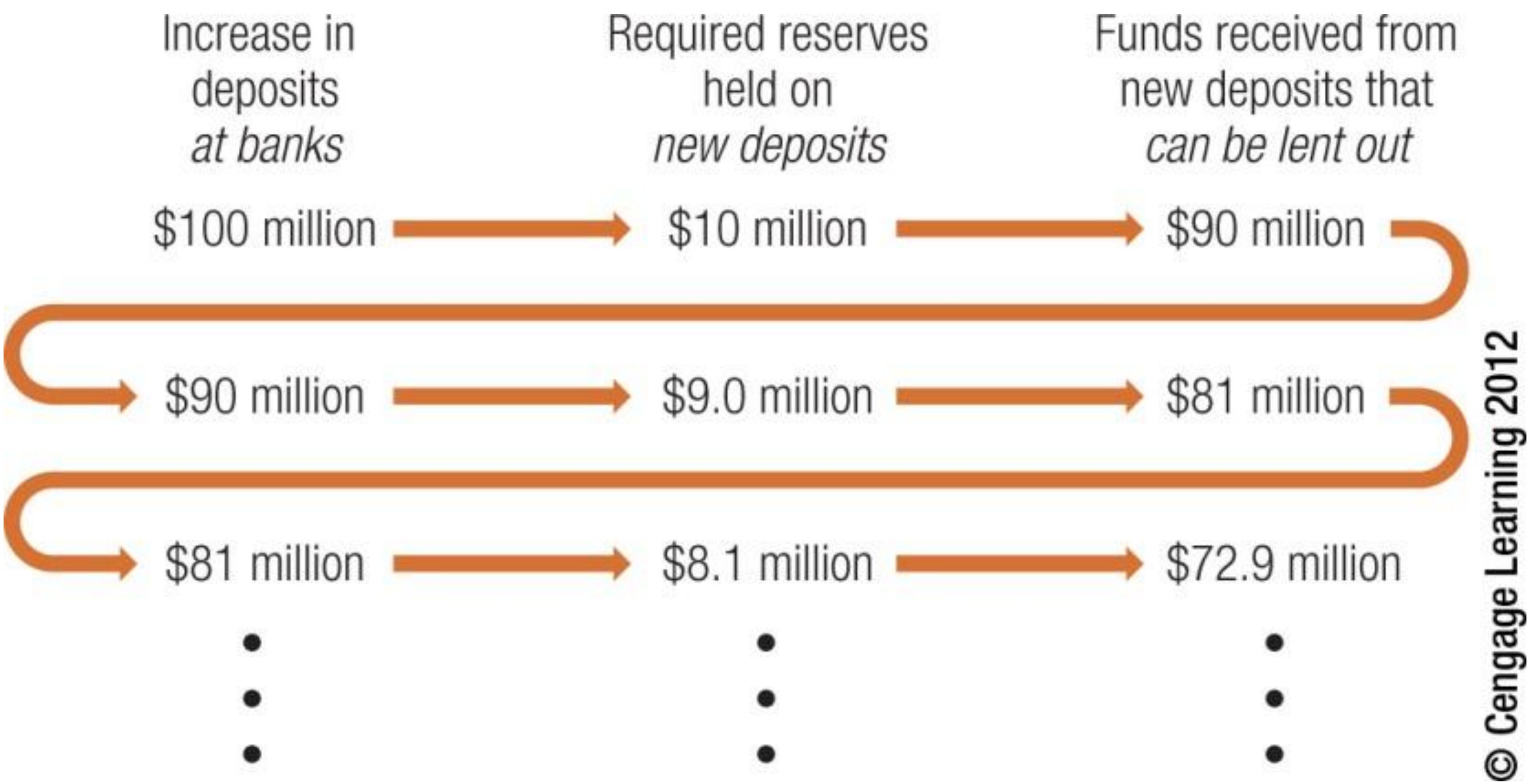
b. **2004–2007:** The Fed's concern shifted from a weak economy to high inflation as the economy improved.

c. **2008:** The Fed used open market operations to reduce interest rates in an attempt to stimulate the economy when economic conditions weakened due to the credit crisis.

Adjusting the Reserve Requirement Ratio

- The **Reserve Requirement** is the proportion of bank deposit accounts that must be held as required reserves or funds held in reserve. This has historically been set between 8 and 12 percent of transaction accounts.
- By reducing the reserve requirement, the Board increases the proportion of a bank’s deposits that can be lent out. The lower the reserve requirement, the greater the lending capacity of a depository institution.
- **Impact of Reserve Requirements on Money Growth**: Leakages occur when households hold cash or banks hold excess reserves. In these cases, the money does not multiply as expected.

Exhibit 4.5 Illustration of Multiplier Effect

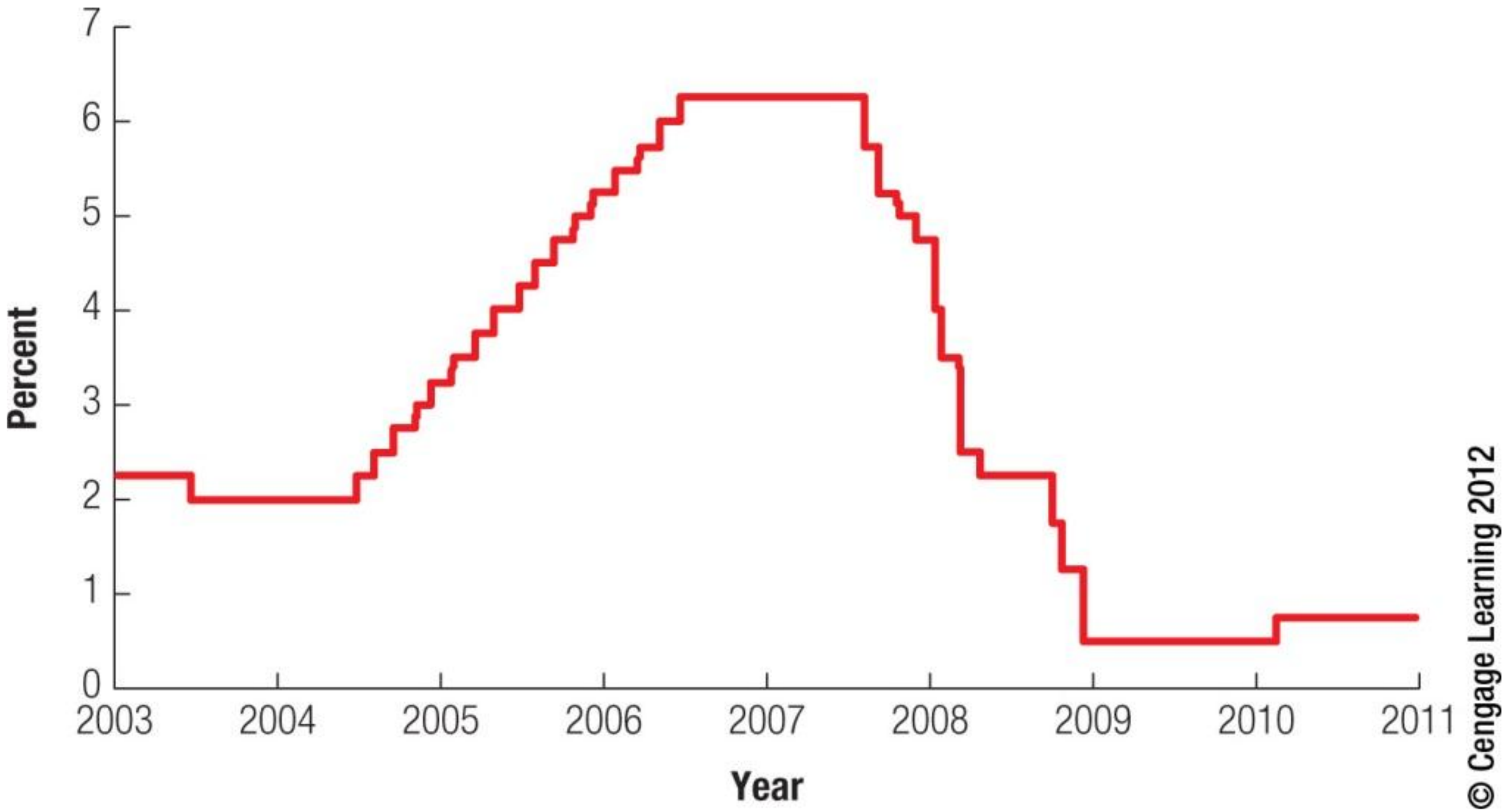


Adjusting the Fed's Loan Rate

1. Before 2003, the Fed set its loan rate (then called the "discount rate") at low levels when it wanted to encourage banks to borrow, since this activity increased the amount of funds injected into the financial system.

2. Since 2003, the Fed's rate on short-term loans to depository institutions has been called the primary credit lending rate, which is set slightly above the federal funds rate.

Exhibit 4.6 Primary Credit Rate over Time



Source: *Federal Reserve.*

The Fed's Lending Role During the Credit Crisis

1. During the crisis, the Fed provided funding through the discount window:
   a. Bear Stearns, a non-depository institution, was able to borrow at the discount window through a loan to J.P. Morgan Chase.

2. Facilities created by the Fed:
   a. In 2008, the Fed created various facilities that provided loans to financial institutions that purchased particular types of debt securities. In 2010, the Fed closed most of these facilities.
   b. Term Asset-Backed Security Loan Facility (TALF) - created to provide financing to financial institutions purchasing high-quality bonds backed by consumer loans, credit card loans, or automobile loans.

Global Monetary Policy

- Each country has its own central bank that controls the money supply and monetary policy
  a. Central banks of other industrialized countries use open market operations and reserve requirement adjustments as monetary policy tools.
  b. The Fed must consider economic conditions in other countries when assessing the U.S. economy.

Global Monetary Policy

- A Single Eurozone Monetary Policy

  a. **The European Central Bank (ECB),** based in Frankfurt, is responsible for setting monetary policy for all European countries that use the euro. The ECB's monetary goals are price and currency stability.

  b. **Impact of the Euro on Monetary Policy**

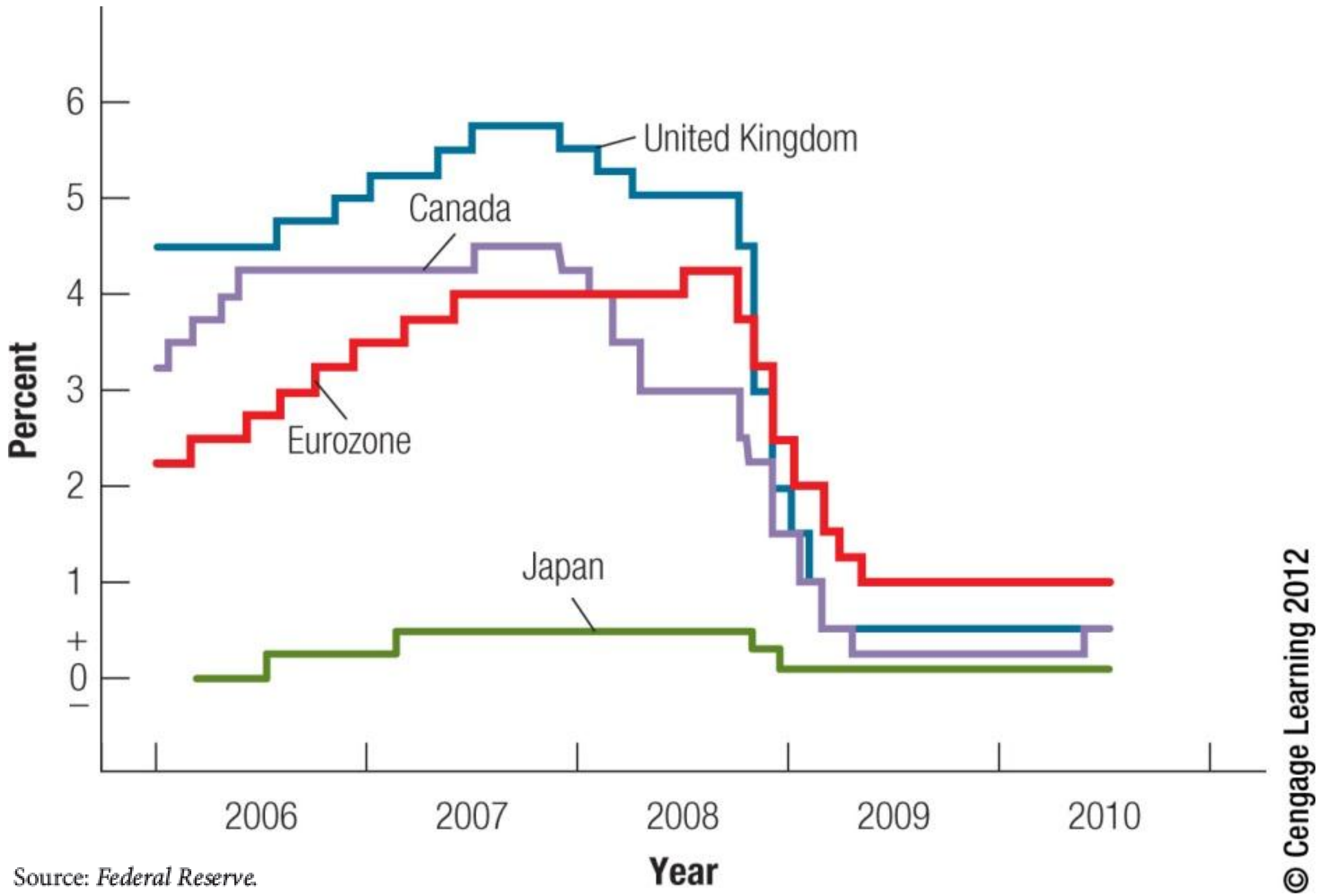
     i. Any changes in the money supply affect all European countries that use the euro.

     ii. Prevents participating countries from solving local economic problems using their own unique economic policies.

Global Central Bank Coordination

1. In some cases, the central banks of various countries coordinate their efforts for a common cause.
2. Global Monetary Policy during the Credit Crisis
    a. August-October 2008: stock market prices in the United States, Canada, China, France, Germany, Italy, Japan, Mexico, Russia, Spain, and many other countries declined by more than 25 percent.
    b. The targeted interest rate level by various central banks have changed over time.

Exhibit 4.7 Targeted Interest Rates by Central Banks over Time



SUMMARY

- The key components of the Federal Reserve System are the Board of Governors and the Federal Open Market Committee. The Board of Governors determines the reserve requirements on account balances at depository institutions. It is also an important subset of the Federal Open Market Committee (FOMC), which determines U.S. monetary policy. The FOMC's monetary policy has a major influence on interest rates and other economic conditions.
- The Fed uses open market operations (the buying and selling of securities) as a means of adjusting the money supply. The Fed purchases securities to increase the money supply and sells them to reduce the money supply.

SUMMARY (Cont.)

- In response to the credit crisis, the Fed provided indirect funding to Bear Stearns (a large securities firm) so that it did not have to file for bankruptcy. It also created various facilities for providing funds to financial institutions and other corporations. One facility allowed primary dealers that serve as financial intermediaries for bonds and other securities to obtain overnight loans. Another facility purchased commercial paper issued by corporations.
- Each country has its own central bank, which is responsible for conducting monetary policy to achieve economic goals such as low inflation and low unemployment. Sixteen countries in Europe have adopted a single currency, which means that all of these countries are subject to the same monetary policy.